

INTERNATIONAL INDIAN SCHOOL, RIYADH.
SAI WORKSHEET-2015-16

SUBJECT: Mathematics

STD: X

Linear Equation of Two Variables:

1. Solve each of the following pairs of linear equation by substitution method, elimination method & Cross multiplication method:
 - a) $-x+3y=8$; $4x+7y=25$
 - b) $x/6+y/15=4$; $x/3 - y/12 = 19/4$
 - c) $0.5x - 0.1y= 0.7$; $1.5x + 0.3y = 3.9$
 - d) $11x + 2y = 76$; $7y - 6x = -1$
 - e) $x + 3 / 5 = 8-y/4 = 3(x+y)$
 - f) $47x + 31y = 63$; $31x + 47y = 15$
 - g) $4/x + 3y = 8$; $6/x - 4y = -5$

2. The larger of two supplementary angles exceeds the smaller by 18 degrees. Find them.
(99 degrees and 81 degrees)

3. The denominator of a fraction exceeds the numerator by 3. If the difference between the square of the denominator and the square the numerator is 21. Find the fraction.
(2/5)

4. Radha's age is 4 times the sum of the ages of her two sons. Six years hence her age will be double the sum of their ages. Find Radha's age. (36)

5. The sum of a two – digit number and the number obtained by interchanging digits of the number is 121. The digits of the number differ by 3. How many such numbers are there? Find them (74,47)

6. A person can row 4 kilometre upstream and 16 km downstream in 1 hour 50 minutes. He can row 20 km downstream and 20 km upstream in 4 hours 10 minutes. Find the speed of the person in still water and the speed of the current. (answer : 10 km per hour , 2km per hour)

7. A bird flying in the same direction as that of the wind covers a distance of 45 km in 2 hours 30 minutes. But it takes 4 hours 30 minutes to cover the same distance when it flies against the direction of the wind. Ignoring conditions other than the wind conditions find
- (i) The speed of the bird in still air (14 km per hour)
 - (ii) The speed of the wind (4 m per hour)
8. Students of a class are made to stand in rows. If one student is extra in a row there would be 2 rows less. If one student is less in a row there would be 3 rows more. Find the number of students in the class. (answer 60)
9. 3 chocolate bars and 4 ice – cream cones cost Rs. 135. If the price of the chocolate increases by 5% and that of an ice – cream cone increases by 10%, the total cost goes up by Rs. 9.75. Find the increased price of each chocolate bar and an ice cream cone. (26.25 , 16.50)
10. 10 women and 20 girls can finish a piece of work in 2 days, while 6 women and 4 girls can finish it in 5 days. Find the time taken by one woman alone and that by one girl alone to finish the work. (40 days , 80 days)